

The following news briefs are sent to you by the National Synchrotron Light Source at Brookhaven National Laboratory, Upton, New York nslsweb.nsls.bnl.gov

Energy Secretary Abraham announces Center for Nanosciences at Brookhaven Lab

On Friday June 14, Secretary of Energy Spencer Abraham announced that the department plans to proceed with a center for nanoscale science research at Brookhaven National Laboratory. Secretary Abraham made the announcement at a meeting with laboratory employees following a tour of Brookhaven laboratory facilities. The announcement follows positive results from a peer-review that the Energy Department conducted of Brookhaven's proposal for a center. The department's Office of Science will now begin preparing the facility's conceptual design report that will be needed to request construction funding from Congress. The preliminary cost range for the project is \$70-85 million. Engineering design, construction and commissioning is estimated to take four years and could start in Fiscal Year 2004.

<http://www.bnl.gov/bnlweb/pubaf/pr/2002/doepr061402.htm>

Science Highlight: Conducting-Insulating Materials Reveal Their Secrets

Contact: Tonica Valla (valla@bnl.gov)
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In the June 6th issue of Nature, research performed by BNL physicists at the NSLS provides new insight into why some materials made of stacks of metallic planes are conductors in the direction of the planes and are insulators in the direction perpendicular to the planes. Such behavior is in marked contradiction with scientists' traditional understanding of metallic conductivity, where the electrical current is carried by electrons in every direction. Understanding how materials that are both conducting and insulating will help scientists gain new insight into superconductors – materials that conduct electricity with no energy loss. For more information, see:

<http://www.bnl.gov/bnlweb/pubaf/pr/2002/bnlpr060502.htm>

Science Highlight: New Insight Into Origin Of Superconductivity in Magnesium Diboride

Contact: Yimei Zhu (zhu@bnl.gov)

A team of scientists from BNL, the National Institute of Standards and Technology (NIST), and the University of Oslo in Norway has provided new insight into the superconductivity of magnesium diboride (MgB₂), an unusual superconductor discovered only last year. The new result appears in the June 17th issue of Physical Review Letters. For more details on this work, see:

<http://www.bnl.gov/bnlweb/pubaf/pr/2002/bnlpr061702.htm>

Record attendance for Annual Users' Meeting

Contact: Patrice Pages (pages@bnl.gov)

A record 380 participants attended the 2002 Annual NSLS Users' Meeting, held May 20-22, 2002. Coming from all over the world, the participants attended a one-day plenary session and eight one-day-long workshops on the latest scientific results achieved at the NSLS in the physical, biomedical, environmental and instrumentation sciences.

http://nslsweb.nsls.bnl.gov/nsls/sci&tech/news_UsersMtg02.htm

Workshop Highlight: Frontiers for Synchrotron Research on Soft Matter and Biomaterials

Contact: Ron Pindak (pindak@bnl.gov)

A workshop on "Frontiers in Synchrotron Research on Soft Matter and Biomaterials" was held from April 24-27 at the Mary Duke Biddle Estate in Tarrytown, NY. The workshop was co-organized by John Flanagan (BNL Biology), Ben Ocko (BNL Physics), and Ron Pindak (NSLS). Seventy-seven attendees from government, university, and industrial labs met at this magnificent site overlooking the Hudson River. The workshop participants related exciting advances and identified open issues in a number of soft matter and biomaterials research areas including: phase transitions in confined geometries and at surfaces, directed self-assembly of soft matter systems into functional nano-structures, controlled inorganic growth in an organic matrix, new behavior in complexes such as those formed by lipids and proteins or liquid-crystals and polymers, and the dynamics of protein-folding. For more details, see:

http://nslsweb.nsls.bnl.gov/nsls/sci&tech/news_softmatter.htm

Course Highlights: RapiData 2002: A Practical Course in Macromolecular X-Ray Diffraction

Contact: Bob Sweet (sweet@bnl.gov)

Brookhaven's offering of RapiData 2002, the fourth in an annual series of crash courses in x-ray crystallography, was once again a huge success. Forty-eight students from around the world participated from April 21 to 26. The program was developed by BNL's Biology and National Synchrotron Light Source (NSLS) departments to introduce students to the best people, newest equipment, and latest techniques in the field of macromolecular x-ray crystallography. Half the students came to observe; the other half came with their own specimens with the goal of solving the structure of a particular enzyme. About four structures were solved during the course, and each of these is likely a publishable result. For more details, see:

http://nslsweb.nsls.bnl.gov/nsls/sci&tech/news_rapidata02.htm

NSLS User elected into the National Academy of Sciences

Congratulations to NSLS user Jennifer Doudna (Howard Hughes Medical Institute and Yale University) upon her election into the National Academy of Sciences in April, 2002. Election to membership in the Academy is considered one of the highest honors that can be accorded a U.S. scientist or engineer. The total number of active members is 1,907.

<http://www4.nationalacademies.org/nas/nashome.nsf>

Successful environmental audit at NSLS

Contact: Bob Casey (casey@bnl.gov)

The NSLS was successfully audited on June 6th by independent reviewers who examined the environmental management program for compliance with ISO 14001 standards. This review was part of a Laboratory-wide evaluation. The reviewers were very complimentary of the NSLS program and staff. During their review, the auditors examined such topics as: training records, procedures, inspection results, waste generation trends, program documents, and incidents. This program will continue to be audited annually.

NSLS 2001 Activity Report now Available

Contact: Nancye Wright (wrightl@bnl.gov)

The 2001 NSLS Activity Report is now available in print and on the web. It will be distributed at the NSLS Users' Meeting, May 20-22. To view the online version, see:

http://nslsweb.nsls.bnl.gov/nsls/pubs/actrpt/2001/title_page.pdf

If you would like to receive a printed copy, you can request one online at:

<http://nslsweb.nsls.bnl.gov/nsls/pubs/actrpt/Default.htm>

Imaging Guidebook now available for download

Contact: Nancye Wright (wrightl@bnl.gov)

Thanks to all of the speakers at the recent NSLS Imaging and Microspectroscopy workshop, held during the 2002 Users' Meeting, a new "Guidebook for Imaging and Microspectroscopy at the NSLS" has been compiled and is now available for download at:

<http://nslsweb.nsls.bnl.gov/nsls/pubs/nslspubs/imaging0502/imaging0502.htm>

User Obligations and Reminders

Pre-Registration: All users must pre-register for each visit.
<http://nslsweb.nsls.bnl.gov/nsls/dbforms/user-regis.asp>

Foreign Nationals: All foreign nationals must submit Form BNL-473. Those without active appointments must arrive Monday-Friday by 3 p.m. (no weekends/holidays).

<http://nslsweb.nsls.bnl.gov/nsls/users/procedures/foreign.htm>

Training: All users who require training/retraining must arrive Monday-Friday by 3 p.m. (no weekends/holidays).

Publication References: Users (except proprietary) are obligated to submit references for all published work.

<http://nslsweb.nsls.bnl.gov/nsls/pubs/pubrefs/Default.htm>

Abstracts: Users are obligated to submit abstracts.

<http://nslsweb.nsls.bnl.gov/nsls/pubs/abstracts/submit.asp>

End of Run Form: All users are asked to complete the End of Run survey at the end of each experimental run.

<http://nslsweb.nsls.bnl.gov/nsls/dbforms/end-of-run.asp>

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<http://nslsweb.nsls.bnl.gov/nsls/announcements/listservers.htm#nsls-news>

If you would like to suggest a news item, please send a message to nslsinfo@bnl.gov.

The current and past issues of the NSLS e-News are available on the web at:

nslsweb.nsls.bnl.gov/nsls/announcements/nslsonlinenews.htm

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